

STEWART (W.B.)

Arsenite of Copper as an Antispasmodic.

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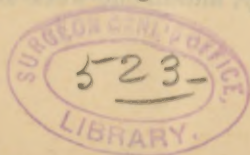
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After all that has been written upon this subject by Dr. Boardman Reed, Dr. John Aulde, and many others, it would be entirely out of place to enter into any long dissertation upon its preparation, general physiological action and therapy. It is my desire to relate several clinical experiences with this valuable drug, inasmuch as the results were so well defined. It is my custom to use a tablet triturate containing one one-hundredth of a grain, and when



referred to in this article that strength is understood. Unless the tablet-mass is triturated many hours and done by reliable parties your results are uncertain, for, as arsenite of copper is merely held in suspension in the water with which it is mixed, the more intimate the trituration the greater will be the power of suspension.

During the past spring and early summer my attention was demanded by a number of very obstinate and severe cases of whooping-cough which developed in very young children. May mainstay has been bromoform in full doses, given with alcohol, glycerin and tincture cardamom comp.; but in spite of this remedy complications arose which demanded other medication, and it occurred to me to try the efficacy of arsenite of copper as an anti-spasmodic, and, happily, the results were surprising.

Case I. Ann Lewis G—., aged three weeks, contracted whooping-cough from children in the house. It developed very rapidly, and in one week she had a hard

paroxysm almost every hour and sometimes two or more each hour. Bromoform was given in one-half drop doses and increased to one drop with good effect for several days, when bowel trouble developed and threatened cholera-infantum. The paroxysms became so hard and violent that each one seemed to be its last, and the whole body became cyanotic at the time. One tablet of arsenite of copper was dissolved in fifteen teaspoonfuls of boiled water, and to it was added five drops of tr. nux vomica. One teaspoonful was given every half-hour for six consecutive hours, and then every hour afterward. Diarrhea and colic were checked in twelve hours, and the number of paroxysms diminished. This remedy was continued alone for one week, at intervals of two hours, with the result that the paroxysms diminished in number and severity, and in four weeks from the onset the child was entirely cured.

Other cases followed, and the arsenite of copper was used in two of them in which

the paroxysms were well defined. The tablet was mixed as before in 15 teaspoonfuls of water, the *nux vomica* omitted; and a dose given every hour until the effects were manifested, and then every two hours. The results were equally satisfactory; the paroxysms diminished both in number and severity, and the process was checked in about four weeks. Parallel cases, treated with bromoform, averaged about twenty-one to twenty-four days in duration.

While it is impossible to draw definite deductions from such a small number of cases and go on record as to its exact results in every case, yet it suggests to me the propriety of putting this remedy to a thorough test as an antispasmodic in pertussis. It has led me to mix treatment, and alternate every one or two hours between bromoform and the arsenite of copper, with more satisfactory results than from either drug alone. It possesses the advantage of being a very acceptable drug to children, and can be given with perfect impunity.

During the summer of 1890, Dr. Boardman Reed and I experimented with the arsenite of copper in the treatment of after-pains in confinement, and published our results in the *Times and Register* of that year. I have followed up this line of investigation in sixteen typical cases, with the following results: Nine cases received absolute relief; six were greatly benefited, and one received no relief. One tablet was dissolved in ten or fifteen spoonfuls of water and one spoonful given every ten, twenty, thirty or sixty minutes as indicated.

Having seen the great antispasmodic action of the preparation in so many cases, its use was suggested in two cases of threatened miscarriage, and with success. Mrs. M. M., aged thirty-five, mother of four children, in her seventh month, did a heavy day's washing which was followed by regular labor pains of the first stage. The pains came regularly about every three to five minutes; os uteri was slightly dilated and relaxed; vagina and vulva

thoroughly lubricated with glairy mucous, and head could be felt presenting high up. She was placed in bed at once; given a hypodermatic injection of morphine, one quarter grain, and atropine, one one-hundred-and-fiftieth. One tablet of arsenite of copper was prepared as usual and one spoonful given every ten minutes for three hours. The pains began to diminish in severity and interval, and in twenty-four hours had completely disappeared, leaving the woman weak and prostrated, but the child was saved. One day later the bowels, which had not been moved for ten days according to her story, became active and developed into a regular attack of cholera morbus, which was soon controlled by the constant use of the arsenite and two hypodermic injections of morphine to relieve the severe pain. This occurred ten days ago, and to-day the woman is moving around the house and says the movement of the child is very active.

In dysmenorrhea, delayed menstruation, scanty menstruation or ovarian irrita-

tion and pain, it is my custom to prepare and give the following in teaspoonful doses every half hour or hour, with very satisfactory results.

R. Cupri arsenitis (trit.)...gr. $\frac{1}{100}$.
 Tr. pulsatillæ.....gtt. viij.
 Tr. nucis vomicæ.....gtt. iv.
 Aquæf. $\frac{3}{4}$ ij.—M.

Each dose of arsenite of copper is so small (gr. $\frac{1}{2000}$) that it is impossible to claim that its good effects result from its antiseptic action. Arsenite of copper in large doses is an irritant, antiseptic and toxic agent. A small dose is also irritant, but that action is small and necessarily limited, and the irritation is only sufficient to stimulate the weakened cells of the gastro-intestinal canal to greater functional and physiological action and place them in a more favorable position for resisting the inroads of disease or aborting it when acquired. It is a typical example of cellular-therapy, for the effect is obtained indirectly through cell action and impression.

Arsenite of copper has given me good results in treating diarrheas in children, providing the bowels have been thoroughly emptied by calomel, magnesia or aromatic syrup of rhubarb. Failing in this, small doses of calomel and ipecac (gr. $\frac{1}{100}$), thoroughly triturated and administered every two hours, will almost invariably give satisfactory results. Nursing children respond rapidly to its action and are relieved of colic, nausea and diarrhea. If good results do not follow the arsenite of copper, do not be too ready to condemn it but rather satisfy yourself that you have obtained a proper preparation and have carefully applied it to such cases as would in all probability be benefited by its use. Let it be understood that its action is entirely unreliable in organic pains and pains of acute inflammations.

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